

AMENDMENTS TO THE CLAIMS

Please cancel Claims 10-15 without prejudice. Please amend Claims 1, 2, 4 and 16. Please add claims 18-22. A complete listing of the claims with proper claim identifiers is set out below:

1. (Currently Amended) A blood vessel-catheter for insertion through a ~~patient's vascular system~~ blood vessel, comprising:

- a) a catheter tube and a bolus, said bolus being molded of resilient plastic;
- b) said catheter tube including a body having a cylindrical wall through which a lumen extends to a distal end of the tube;
- c) said bolus including a body having a connector section joined to said catheter tube at said distal end on the longitudinal axis of said ~~body~~ tube at its distal end, a passage section and a nose section;
- d) said nose section having a longitudinal axis and an unperforated, rounded bullet nose on its longitudinal axis, said longitudinal axis of said nose section extending through said rounded, bullet nose at its tip;
- e) said passage section of said bolus containing an axially extending passage communicating at one end with said tube lumen and at another end with a port opening radially through the side of said passage section;
- f) said nose section being joined to said passage section at the forward end of said port and in such a manner that the longitudinal axis of said nose section ~~extends~~ is inclined to one side of the longitudinal axis of said ~~passage section~~ tube at its distal end, said nose section having a maximum thickness on a plane perpendicular to its longitudinal axis which is smaller than the outside diameter of the tube.

2. (Currently Amended) The catheter of Claim 1 further characterized in that:

a) said nose section, where it joins said passage section, has a center which is radially offset from the longitudinal axis of said ~~tube body~~ so that a portion of the outer periphery of said ~~bullet nose section~~ is substantially tangent with an imaginary cylinder projected forwardly from the cylindrical outer surface of said connector section.

3. (Previously Presented) The catheter of Claim 1 further characterized in that:

a) said port extends around more than 180° of the circumference of said passage section.

4. (Currently Amended) The catheter of Claim 4_2 further characterized in that:

a) said bolus body includes a longitudinally extending stiffening arch formed outwardly of said passage section opposite said port.

5. (Currently Amended) The blood vessel catheter of Claim 1 further characterized in that:

a) said bolus body has opposite sides bracketing said port which taper radially inwardly ~~toward the longitudinal axis of said body~~ as they extend forwardly from said passage section into said nose section.

6. (Canceled)

7. (Canceled)

8. (Currently Amended) The catheter of Claim 2 further characterized in that:

a) said bolus body has opposite sides bracketing said port which taper radially inwardly ~~toward the longitudinal axis of said passage section~~ as they extend forwardly from said passage section into said nose section.

9. (Previously Presented) The catheter of Claim 8 further characterized in that:

a) said port has a trailing edge at the outer periphery of said passage section;

b) said radially inward taper of said sides beginning forwardly of said trailing edge.

10. (Cancelled)

11. (Cancelled)

12. (Cancelled)

13. (Cancelled)

14. (Cancelled)

15. (Cancelled)

16. (Currently Amended) A catheter for insertion through a ~~patient's vascular system~~ blood vessel, comprising:

a) a tube having a predetermined outside diameter and a distal end;

b) a bolus including a connector section, a passage section and a nose section, said connector section having a cylindrical outer surface and being connected to ~~said~~ said distal end on a longitudinal axis of said tube and ~~connector section~~ at its distal end;

c) said passage section containing an axially extending passage and a radially extending port which opens through the side of said bolus behind said nose section;

d) said nose section being joined to said passage section at the forward end of said passage section and having a bullet nose, the maximum cross-sectional diameter of said nose section where it joins said passage section being substantially less than said predetermined diameter;

e) said nose section having a longitudinal axis which extends through the tip of a bullet nose on said nose section and which is inclined from said longitudinal axis of

said ~~tube, connector section~~ and said ~~bullet nose section~~ having a rounded ~~an~~ external surface portion which is substantially tangent to an imaginary cylinder projected forwardly from the cylindrical outer surface of said connector section.

17. (Currently Amended) The catheter of Claim 16 further characterized in that:

a) said maximum ~~cross-sectional~~ outside diameter of said nose section where it joins said passage section being at least 25 percent smaller than the ~~largest cross-sectional~~ maximum diameter of said passage section.

18. (New) The catheter of Claims 4 or 16 further characterized in that:

a) said stiffening arch having an outer surface which defines an arc extending the length of said port and contiguous with the outer surface of the bullet nose.

19. (New) The catheter of Claim 17 further characterized in that:

a) said bolus body includes a longitudinally extending stiffening arch formed radially outwardly of said passage section opposite said port;

b) said stiffening arch having an outer surface which defines an arc extending the length of said port and contiguous with the outer surface of the bullet nose.

20. (New) A blood vessel catheter, comprising:

a) a catheter tube and a bolus, said bolus being molded of resilient plastic;

b) said catheter tube including a body having a cylindrical wall through which a lumen extends to an opening at the distal end of the tube;

c) said bolus including a body having a connector section joined to said catheter tube at said distal end, and a nose section;

d) said nose section having a longitudinal axis and an unperforated, rounded bullet nose on its longitudinal axis, said longitudinal axis of said nose section extending through said rounded, bullet nose at its tip;

e) said bolus nose section being positioned in front of said lumen opening and forming a port opening radially from the side of said catheter;

f) the longitudinal axis of said nose section being inclined to one side of the longitudinal axis of said tube at its distal end, said nose section having a maximum thickness on a plane perpendicular to its longitudinal axis which is smaller than the outside diameter of the tube.

21. (New) The catheter of Claim 20 further characterized in that:

a) said nose section has a center which is radially offset from the longitudinal axis of said tube so that a portion of the outer periphery of said bullet nose is substantially tangent with an imaginary cylinder projected forwardly from the cylindrical outer surface of said tube.

22. (New) The catheter of Claims 20 or 21 further characterized in that:

a) said bolus body includes a longitudinally extending stiffening arch formed radially outwardly of said passage section opposite said port;

b) said stiffening arch having an outer surface which defines an arc extending the length of said port and contiguous with the outer surface of the bullet nose;

c) the resulting shape of said nose section being arcuate and curving in the radial direction of said port to its bullet nose tip.

23. (New) The catheter of Claim 22 further characterized in that:

a) said catheter, including said radially outwardly extending arch, has a maximum cross-sectional area along its length from the catheter tube to the tip of said bolus which never exceeds that of the cross-sectioned area of the tube.